

GENERAL NOTES:

Methods and materials for construction of "Breakaway Sign Posts" shall conform to current Standard and Supplemental Specifications for Signing. Current and Standard and Supplemental Specifications for Steel Structures shall also apply to appropriate work, such as welding, high tensile strength bolts, bolt holes, bolt tension, etc.

Holes in Fuse Plates and Splice Plates shall be drilled and the notches provided so that no metal projects beyond any face of the plate and the edges of the notches are smooth and true.

All parts and hardware for posts shall be galvanized after fabrication except as noted. All bearing surfaces of fuse plate assembly shall be smooth and free of beads or runs.

The price bid for "Breakaway Sign Post" shall be considered full compensation for fabrication and installation as indicated hereon.

Post cut shall be accomplished by either sawing or flame cutting, and may be made either before or after galvanizing of the post. If cut is made after galvanizing, the damaged area shall be repaired by painting or soldering. The resultant cut shall be subject to the approval of the Engineer.

ALTERNATE NO. 2 ONLY:

If post is to be transported after cut is made, a "splice plate" shall be bolted to front of post to prevent damage to the post.

BOLTING PROCEDURE-FUSE PLATE ASSEMBLY:

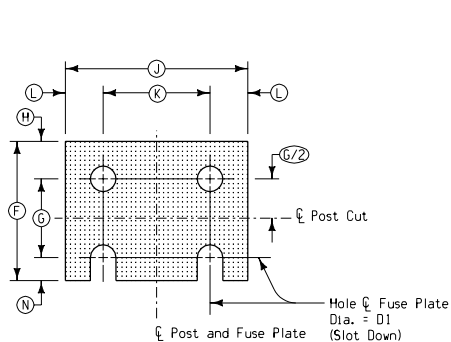
Fuse bolts shall be tightened by a method approved by the Engineer to obtain the torque specified for each bolt.

High strength bolts, nuts and washers shall be installed in an ungalvanized condition. After installation, all exposed surfaces of the bolts, nuts and washers shall be given two coats of zinc rich paint.

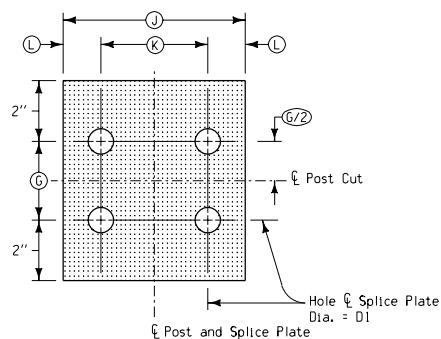
Alternate 1
(With Splice Plate)

Alternate 2
(One-Piece Post)

DETAILS OF FUSE PLATE ASSEMBLY



FUSE PLATE
(Thickness T3)



SPLICE PLATE
(Thickness T4)

| Bolt Size | Torque |
|-----------------|--------------|
| $\frac{1}{2}$ " | 100 Ft. Lbs. |
| $\frac{3}{8}$ " | 180 Ft. Lbs. |
| $\frac{3}{4}$ " | 320 Ft. Lbs. |
| $\frac{7}{8}$ " | 470 Ft. Lbs. |

| FUSE AND SPLICE PLATE DATA | | | | | | | | | | | |
|----------------------------|-----------|--------|--------|--------|--------|--------|--------|------|--------|------|------|
| Post Size | Bolt Dia. | (F) | (G) | (H) | (J) | (K) | (L) | (N) | D1 | T3 | T4 |
| W6x9 | 1/2" | 3 5/8" | 2" | 1 1/8" | 4" | 2 1/4" | 7/8" | 1/2" | 9/16" | 1/4" | 1/4" |
| W6x12 | 5/8" | 3 3/4" | 2" | 1 1/8" | 4" | 2 1/4" | 7/8" | 5/8" | 11/16" | 3/8" | 1/4" |
| W6x15 | 3/4" | 4 1/2" | 2 1/2" | 1 1/4" | 6" | 3 1/2" | 1 1/4" | 3/4" | 13/16" | 1/2" | 1/4" |
| W8x18 | 3/4" | 4 1/2" | 2 1/2" | 1 1/4" | 5 1/4" | 2 3/4" | 1 1/4" | 3/4" | 13/16" | 1/2" | 1/8" |
| W8x21 | 7/8" | 4 7/8" | 2 1/2" | 1 1/2" | 5 1/4" | 2 3/4" | 1 1/4" | 7/8" | 13/16" | 5/8" | 3/8" |
| W10x22 | 7/8" | 5 3/8" | 3" | 1 1/2" | 5 3/4" | 2 3/4" | 1 1/2" | 7/8" | 13/16" | 5/8" | 3/8" |
| W10x26 | 7/8" | 5 3/8" | 3" | 1 1/2" | 5 3/4" | 2 3/4" | 1 1/2" | 7/8" | 13/16" | 5/8" | 3/8" |
| W12x26 | 7/8" | 5 3/8" | 3" | 1 1/2" | 6 1/2" | 3 1/2" | 1 1/2" | 7/8" | 13/16" | 5/8" | 3/8" |

Iowa Department of Transportation
Project Development Division

STANDARD ROAD PLAN RD-21B

REVISION: Redrawn in CAD.

REVISION NO. 4

REVISION DATE 05-24-99

APPROVED BY DESIGN METHODS ENGINEER

DETAILS OF FUSE PLATE ASSEMBLY

(FOR BREAKAWAY SIGN POST)